

U.S. Patent Application Serial No. 09/321,605
Amendment Under 37 C.F.R. §1.111 dated August 21, 2003
Reply to Office Action of May 21, 2003

REMARKS

Claims 1 - 22 are pending in the present application, of which claims 4, 5 and 17 - 20 have been withdrawn from consideration. By this Amendment, claims 1 and 21 have been amended. The applicant respectfully submits that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated **May 21, 2003**.

Examiner Interview

The courtesy extended by Examiner Chen during the August 7, 2003 telephone interview was gratefully appreciated. The substance of such interview are hereby incorporated into the following remarks.

New Matter Rejection:

The amendment filed February 27, 2003 is objected under 35 U.S.C. §132 because it introduces new matter into the disclosure. 35 U.S.C. §132 states that no amendment shall introduce new matter into the disclosure of the invention.

This objection is respectfully traversed.

The Examiner takes the position that “the added material which is not supported by the original disclosure is as follows: Re claims 1 and 21, the phrase ‘the entire portion being with respect

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to a width and a length of the upper electrode' and 'the wiring having lower resistance than the local interconnection.'"¹

With regard to the phrase "the entire portion being with respect to a width and a length of the upper electrode," the Examiner's position is overcritical since Fig. 2B of the present invention clearly shows that local interconnection 9 covers the entire portion of the upper electrodes with respect to both the upper electrodes' 7 width and length.

It is respectfully submitted that during the August 7, 2003 interview, it was explained to Examiner Chen that support for the feature of "the entire portion being with respect to a width and a length of the upper electrode" is clearly provided in Fig. 2B of the present invention. During such interview, the Examiner failed to provide any rebuttal argument with respect Fig. 2B not supporting this feature set forth in each of the independent claims 1 and 21.

With regard to the claimed feature of "the wiring having lower resistance than the local interconnection," this feature has been deleted from each of claims 1 and 21. According, withdrawal of this objection is respectfully submitted.

¹Please see, item 1, page 2 of the Action.

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Drawings:

The drawings are objected to under 37 C.F.R. 1.83(a) due to the Examiner's contention that the multi-layer films (Re claim 1 and 21) must be shown or the feature(s) canceled from the claim(s). As such, this feature "the wiring composed from multi-layer films" has been deleted from each of the independent claims 1 and 21. As such, withdrawal of this objection is respectfully solicited.

35 U.S.C. §112, First Paragraph, Rejection:

Claims 1 - 3, 6 - 16, 21 - 22 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

This rejection is respectfully traversed.

As discussed above, support for the claimed feature of "the entire portion being with respect to a width and a length of the upper electrode" is clearly provided in Fig. 2B of the present invention, and the claimed feature of "the wiring having lower resistance than the local interconnection," has been deleted from each of claims 1 and 21. According, withdrawal of this rejection is respectfully submitted.

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As to the Merits:

As to the merits of this case, the Examiner sets forth the following rejections:

(1) claims 1 - 3, 9, 11 - 16 and 21 - 22 stand rejected under 35 U.S.C. § 102(e) as being anticipated by **Mochizuki et al.** (of record); and

(2) claims 6 - 8 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over **Mochizuki et al.** in view of **Kawai et al.** (of record).

Both of these rejections are respectfully traversed.

In response to Applicants' argument that none of the applied references, singly or in combination, teach or fairly suggest the significant structural arrangements of the applicants' claim invention concerning forming a local interconnection covering an entire portion of the upper electrode with an area which is larger than an area where the upper electrode contacts with the oxide dielectric film in a plan view the entire portion being with respect to a width and a length of the upper electrode, the Examiner fails to give any meaningful rebuttal.

Instead, the Examiner continues to incorrectly argue that Figs. 17 and 19 - 23 of **Mochizuki** illustrate a plan view which shows an entire portion of the local interconnection covering a portion

of an upper electrode with respect to a width and a length of the upper electrode. See page 5, lines 1 - 5 of the Action.

That is, Mochizuki clearly discloses that each of Figs. 17 and 19 - 23 are "cross-sectional" views and not "plan" views. However, the Examiner simply refuses to properly consider Figs. 17 and 19 - 23 as cross-sectional views. Instead, the Examiner continues to incorrectly argue that Figs. 17 and 19 - 23 of Mochizuki illustrate a plan view.

More specifically, while an edge portion of a local interconnection in Figs. 17, 19, 20, 21 and 23 of Mochizuki maybe arranged above an edge portion of one side of a capacitor, however, in a plan view, as shown in Fig. 8, since the local interconnection 22 is formed inside the upper electrode 19, clearly, the local interconnection 22 does not cover an entire portion of the upper electrode 19 with respect to a width and a length of the upper electrode in a plan view. In other words, Mochizuki is absent any teaching or disclosure concerning the local interconnection 22 covering the upper electrode 19 with respect to the width of the upper electrode 19, since as shown in the plan view of Fig. 8 the width of the upper electrode 19 is greater than the width of the local interconnection 22. Therefore, it is impossible for the local interconnection 22 to cover an entire portion of the upper electrode 19, the entire portion being with respect to a width and a length of the upper electrode.

Accordingly, since hydrogen is the smallest element, the hydrogen is diffused to the capacitor via a second insulating film from an edge portion of the local interconnection. That is, diffusion to the capacitor of hydrogen used in the step of forming the third insulating film on the local interconnection can not be prevented in Mochizuki completely since, as shown in the plan view of Fig. 8 of Mochizuki, local interconnection 22 does not cover an entire portion of the upper electrode 19. More specifically, local interconnection 22 does not cover the entire width of the upper electrode 19.

In Mochizuki, since there is no technical idea which is to prevent that the capacitor is exposed to reduction atmosphere by covering an entire portion of the capacitor with only a local interconnection, it is unthinkable that the local interconnection is formed to cover the entire portion above the capacitor.

Once there is no above technical idea in Mochizuki, persons skilled in the art can not easily think the feature that the local interconnection is formed to cover the entire portion above the capacitor.

Accordingly, the feature of the present invention is not disclosed in Mochizuki and the present invention technical idea is not easily devised from Mochizuki.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact Applicant's undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, Applicant respectfully petitions for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper, to Deposit Account No. 01-2340.

Respectfully submitted,

ARMSTRONG, WESTERMAN & HATTORI, LLP



Thomas E. Brown
Attorney for Applicant
Reg. No. 44,450

TEB/kal
Atty. Docket No. **990535**
Suite 1000
1725 K Street, N.W.
Washington, D.C. 20006
(202) 659-2930

Customer Number
23850
PATENT TRADEMARK OFFICE